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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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CONNOLLY BOVE LODGE & HUTZ LLP
1875 EYE STREET, N.W.
SUITE 1100
WASHINGTON, DC 20036

EXAMINER	
FISCHER, JUSTIN R	

ART UNIT	PAPER NUMBER
1791	

MAIL DATE	DELIVERY MODE
04/30/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/577,131	HOTAKA, TAKESHI	
	Examiner	Art Unit	
	Justin R. Fischer	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 24, 2008 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glintz (US 6,672,349, of record) and further in view of Imamura (US 4,214,058, of record) and Sandstrom (US 5,328,949, of record).

Glintz is directed to a runflat tire construction comprising a runflat support member formed of a ring-shaped metal shell 2 and rubber elastic members 21,22. In this instance, Glintz generally teaches the use of elastic rubber compositions having different fillers and additives (Column 4, Lines 22-37). While Glintz fails to disclose a specific composition for the aforementioned rubber elastic members, the claimed rubber composition is consistent with those compositions commonly used in the tire industry (in

general), as shown for example by Imamura (Column 1, Lines 5-10. Column 2, Lines 15, Column 3, Lines 40-50, and Column 4, Lines 4-10). One of ordinary skill in the art at the time of the invention would have been particularly motivated to use the composition of Imamura since it is described as having a high degree of adhesion to metals (Column 1, Lines 5-10) and the method of Glintz involves a rubber, elastic member that is bonded/attached to a metal rim and a metal shell.

In describing the composition, Imamura suggests 100 phr of at least diene based rubber, sulfur (5 phr in single example- Table 1), 0.01-1 phr of cobalt acetyl acetonate, carbon black, and silica. The reference further suggests that "other conventional compounding agents may be suitably added to the rubber composition" (Column 4, Lines 1-3). One of ordinary skill in the art at the time of the invention would have found it obvious to include a silica coupler since such an additive is conventionally used in combination with silica in order to improve the reinforcing effect of silica, as shown for example by Sandstrom (Column 1, Lines 35-64). It is emphasized that silica couplers are conventionally used in tire rubber compositions for the aforementioned benefits. It is further noted that applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed composition.

Lastly, with respect to the independent claim, the claimed amounts for the carbon black, silica, and silica coupler are consistent with conventional tire rubber compositions, as shown for example by Sandstrom (Column 2, Lines 40-62).

Regarding claim 2, as is conventional in the tire industry, the rubber composition of Glintz in view of Sandstrom would include sulfur at a loading between 1 and 10 phr (see Example in Table 1).

With respect to claims 3 and 7, the supporting members of Glintz are arranged between the metal shell.

Regarding claims 4, 8, 9, and 17, Glinz suggests the preferred use of aluminum or an aluminum alloy (Column 4, Lines 20-30). One of ordinary skill in the art at the time of the invention would have recognized the language as being generally directed to metallic materials, it being well recognized that steel and stainless steel are two of the most common metallic materials. Furthermore, applicant has not provided a conclusive showing of unexpected results to establish a criticality for the use of steel or stainless steel.

As to claims 5, 10, 11, 12, and 18-20, one of ordinary skill in the art at the time of the invention would have been able to appropriately select the bond area in order to obtain a sufficient degree of adhesion between the supporting members and the ring torus- absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to have a ratio S/R of at least 4.5. It is noted that this ratio suggests that the minimum bond area increases with an increase in tire size, as would be expected since larger tires would need increased reinforcement.

With respect to claims 6 and 13-16, it appears from Figure 3 that the bonding surface is comprised of an axial and radial surface.

Response to Arguments

4. Applicant's arguments filed April 24, 2008 have been fully considered but they are not persuasive.

Applicant argues that Glintz fails to even remotely suggest the use of cobalt acetyl acetonate together with the carbon black and the silica in the specified weight ratios. Applicant further contends that the composition of Imamura fails to suggest the use of cobalt acetyl acetonate together with the carbon black and the silica in the specified weight ratios.

It is agreed that no single prior art reference of record teaches a combination of cobalt acetyl acetonate and carbon black and silica having the specified weight ratios. However, as set forth in the rejection above, one of ordinary skill in the art at the time of the invention would have found it obvious to use the composition of Imamura in the tire of Glintz since it is described as providing a high degree of adhesion with metals and such is the arrangement in the tire of Glintz. In this instance, the composition of Imamura can include cobalt acetyl acetonate, carbon black, and silica. As to the specific ratios of carbon black and silica, Sandstrom provides evidence that the claimed values are consistent with those used in the tire industry. It is emphasized that the composition of Imamura does contain carbon black and silica- it appears that the reference is not particularly concerned with the ratio of these fillers and applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed ratios.

Applicant points to Examples 1-4 in Table I and Examples 7-10, especially Examples 7 and 9, in Table II.

In regards to Table I, none of the embodiments include carbon black and silica in accordance to the claimed ratios and. Thus, Table I fails to provide a conclusive showing of unexpected results.

As to Table II, a plurality of variables are varied between the inventive examples and the comparative example such that is unclear if any realized benefits are a result of a single variable or a combination of variables. For example, Comparative Example 5 and Example 5 differ in the amount of carbon black, the amount of silica, and the amount of silica coupler- it is unclear if the realized benefits are a result of the absolute amounts of respective fillers, the ratio of the respective fillers, and/or the absolute amount of silica coupler. It is further noted that examples 6, 8, 10, and 12 additionally contain a different amount of sulfur. Thus, Table II does not provide a conclusive showing of unexpected results to establish a criticality for the use of carbon black and silica having a weight ratio range between 5/2 to 4/3. It is suggested that applicant compare the inventive compositions to those having the same amount of filler (combined amounts of carbon black and silica), silica coupling agent, and sulfur but having different ratios between the carbon black and silica that fall outside the claimed range. Lastly, the same argument is applicable with respect to Examples 7 and 9 (differ in sulfur, silica coupling agent, and ratio, even within inventive examples).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Justin Fischer
/Justin R Fischer/
Primary Examiner, Art Unit 1791